PHASE II MITIGATION PLAN – REQUIRED INFORMATION - Revised November 13, 2014

The information that is checked below is required by the Department in order for the Phase II Mitigation Plan for this application #_____to be considered complete.

Plan view scaled drawings, including:

- ☐ A vicinity map showing the mitigation project location, existing land use and zoning
- ☐ The location, type, and acreage of proposed nontidal wetland mitigation activities. Plans should clearly show the boundaries of the area being counted for mitigation credit
- ☐ The proposed location of stockpile areas
- ☐ The location of sediment and erosion control practices. Sediment and Erosion Control Plans may be required
- ☐ The locations of all areas used to store machinery, equipment or supplies
- ☐ The proposed source of borrow materials
- ☐ The proposed location, spacing, and type of propagules for each plant species
- ☐ A cross-section drawing showing existing and proposed final site conditions, including grade, elevation and slope. Cross-sections should also include existing and proposed wetlands. Side slopes should be flat enough to reduce erosion potential and blend in with the landscape (e.g. 6:1 or flatter)
- ☐ A construction schedule that includes estimated start and completion dates. Silt fence must be completely removed after construction has been completed. Contact an MDE Compliance Inspector for confirmation that the site is stabilized.
- ☐ Include locations of any potentially conflicting land use (e.g. utility easements).

Hydrology:

- ☐ Estimated elevation of surface and/or ground water as measured from the soil surface twice per month, March through May, and monthly, June through October
- ☐ The source of the water such as ground water, precipitation, and surface water, over various seasons of the year, and any relevant precipitation data
- ☐ The reliability of the hydrologic sources throughout the various seasons of the year
- ☐ It may be desirable to delay planting until the contractor confirms that the constructed wetland has the desired hydrology. For example, after grading the site, the contractor may monitor the site for at least six months, including a seasonally dry period, before planting the woody species.

Soils/substrate:

- ☐ A description of existing and planned soil and substrate conditions. Existing soil should be verified in the field. Soil borings may also be required by the Department.
- ☐ Topsoil should be salvaged and replaced whenever possible to a depth of <u>at least</u> 6 inches. Site should be graded to below 6 inches of final grade, then 6 inches topsoil spread over site. For sites being constructed in subsoil, higher amounts of topsoil may be required.
- ☐ Soil and substrate amendments needed to meet hydric soil characteristics and maintain the specified plant species. * <u>A minimum of 60 cubic yards of organic matter per acre is required</u>. Supplemental large woody debris should also be added, at a minimum rate of three dump truck loads per acre.
- ☐ The surface of the soil must not be compacted to the extent that it limits plant establishment and microbial activity. Upon completion of initial grading, the soil must be disked or chisel plowed to a depth of at least 8 inches.
- ☐ Include microtopography. It is recommended that microtopography variations are up to 0.5 feet from design elevation, with no more than 25 percent of each wetland cell remaining at the design elevation.

Planting:

- ☐ The scientific and common names of plant species to be used. All species planted within the wetland and wetland buffer shall be native to that region of the State. All species used for temporary or permanent seeding must be native or non-persistent. Ash species should not be planted.
- ☐ With the exception of temporary stabilization species, all species planted in the wetland should have an Indicator Status of Obligate, Facultative Wet, or Facultative. No more than 50% shall be facultative.
- ☐ Planting dates for each species.
- ☐ The method to be used for plant protection from herbivory by deer, voles, beaver, etc. (including fencing, tubing or other protection).

Other considerations:

- ☐ The applicant should provide the Department with a GIS polygon layer showing the boundary of the area(s) getting mitigation credit. The polygon(s) should not include berms, buffers, upland pockets, etc. unless these areas are getting mitigation credit. If the applicant modifies the mitigation boundary during construction, the applicant should submit the updated mitigation boundary. *This file should be a shapefile or feature class, in the coordinate system Maryland State Plane NAD 1983 (Meters).
- ☐ A 5-year monitoring schedule establishing responsibility for the removal of exotic and nuisance vegetation, and permanent establishment of the nontidal wetland and its component parts. Monitoring shall be conducted according to MDE's Monitoring Protocol (copy attached). If tree protection tubes or tree stakes are used, they must be removed prior to monitoring termination.
- ☐ The person/consultant responsible for preparing and submitting the annual monitoring reports. This will require an agreement with a consultant or other qualified person in advance.
- ☐ The type of physical protective barrier to be used to reduce human encroachment (e.g. mowing, dumping) including signs, fences, etc.
- ☐ Best Management Practices for working in nontidal wetlands, wetland buffers, waterways, and 100-year floodplains should be included on plans
- ☐ Plans must include wetlands, wetland buffers, 100-year floodplain, and waterways
- ☐ Any proposed impacts to floodplains, waterways, or regulated open water must get authorization from the MDE Waterways Division prior to Phase II Mitigation Plan approval
- ☐ Any disturbance over one acre must apply with MDE Compliance Program for a NOI permit
- ☐ All outstanding issues with other agencies (e.g. MHT, DNR Heritage) have been resolved
- ☐ Mitigation areas proposed for Forest Conservation Act requirements should be clearly shown
- ☐ Mitigation cannot be used for TMDL credits.
- ☐ The type of surety bond or other security that shall be payable to the State and conditioned upon the successful completion of construction of the mitigation project according to an approved mitigation plan
- ☐ A detailed description of the site protection mechanism to be used. (Approved methods of protection include conservation easements, deed restrictions, restrictive covenants, or deeding the land to an organization or public agency). Documentation that the selected protection mechanism has been recorded must be submitted to the Department within 60 days of the completion of construction of the mitigation project.
- ☐ Evidence of a legal right to implement the proposed mitigation plan on the selected site(s). (Acceptable methods of securing legal right to undertake the mitigation project include recorded deeds, executed conservation easements, a landowner agreements, or contracts of sale for the selected site.)
- ☐ An "as-built" site design plan shall be submitted to the Department within 60 days of the completion of the mitigation project. If the project was built as planned, a notification stating that can substitute for the "as-built" plan.
- ☐ For all projects that qualify under the Maryland State Programmatic General Permit-4 (MDSPGP-

4), the Mitigation Plan must also meet the requirements of the 2008 Federal Mitigation Rule, as specified in 33 CFR 332.4(c). Address in detail the 12 elements (attached).

All of the requested information listed above should be submitted to:

Maryland Department of the Environment
Wetlands and Waterways Program
Mitigation and Technical Assistance Section
1800 Washington Boulevard, Suite 430
Baltimore, Maryland 21230

The Department will render a decision concerning the acceptability of Phase II of the mitigation plan within 45 days of receipt of a completed plan, unless a final permit decision has not been made. If the Department fails to notify the applicant within the 45-day period, the plan shall be considered acceptable unless a final permit decision has not been made.

12 Components of a Compensatory Mitigation Plan /
Elements of the 2008 Mitigation Rule

1. Objectives. A description of the resource type(s) and amount(s) that will be provided, the method of compensation (restoration, establishment, preservation etc.), and how the anticipated functions of the mitigation project will address watershed needs.
2. Site selection. A description of the factors considered during the site selection process. This should include consideration of watershed needs, onsite alternatives where applicable, and practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the mitigation project site.
3. Site protection instrument. A description of the legal arrangements and instrument including site ownership, that will be used to ensure the long-term protection of the mitigation project site.
4. Baseline information. A description of the ecological characteristics of the proposed mitigation project site, in the case of an application for a DA permit, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other characteristics appropriate to the type of resource proposed as compensation. The baseline information should include a delineation of waters of the United States on the proposed mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or in-lieu fee program only needs to provide baseline information about the impact site.
5. Determination of credits. A description of the number of credits to be provided including a brief explanation of the rationale for this determination.
    - For permittee-responsible mitigation, this should include an explanation of how the mitigation project will provide the required compensation for unavoidable impacts to aquatic resources resulting from the permitted activity.
    - For permittees intending to secure credits from an approved mitigation bank or in-lieu fee program, it should include the number and resource type of credits to be secured and how these were determined.
6. Mitigation work plan. Detailed written specifications and work descriptions for the mitigation project, including: the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water; methods for establishing the desired plant community; plans to control invasive plant species; proposed grading plan; soil management; and erosion control measures. For stream mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings.
7. Maintenance plan. A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.
8. Performance standards. Ecologically-based standards that will be used to determine whether the mitigation project is achieving its objectives.
9. Monitoring requirements. A description of parameters monitored to determine whether the mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting monitoring results to the DE must be included.
10. Long-term management plan. A description of how the mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management.
11. Adaptive management plan. A management strategy to address unforeseen changes in site conditions or other components of the mitigation project, including the party or parties responsible for implementing adaptive management measures.
12. Financial assurances. A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the mitigation project will be successfully completed, in accordance with its performance standards.